

Abstract of the Disclosure

The present invention relates to a method for fabricating a gate electrode of a semiconductor device with a double hard mask capable of preventing an abnormal oxidation of a metal layer included in the gate electrode and suppressing stress generation. The method includes the steps of: forming a gate insulation layer on a substrate; forming a gate layer structure containing at least a metal layer on the gate insulation layer; forming a hard mask oxide layer on the gate layer structure at a temperature lower than an oxidation temperature of the metal layer; forming a hard mask nitride layer on the hard mask oxide layer; patterning the hard mask oxide layer and the hard mask nitride layer as a double hard mask for forming the gate electrode; and forming the gate electrode by etching the gate layer structure with use of the double hard mask as an etch mask.

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